## ABSTRACT OF THE DISCLOSURE

A monitoring system comprising of a phasor transducer that receives analog signals representative of parameters of electricity in a circuit of a distribution system, an analog to digital converter that receives the analog signals and outputs a digital data signal to a processor coupled to the analog to digital converter to receive the digital data signal output. The processor computes phasor data representative of the electricity in the circuit based on the digital data and provides a digital output representative of the phasor data. A network-compatible port is coupled to the processor to transmit the phasor data onto a digital network coupled thereto. A phasor array processor is connected to the digital network and computes combined phasor data for a plurality of the phasor transducers based upon the phasor data received from the phasor transducers.